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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,347	01/04/2001	Marilyn E. Karaman	FB RICE & Co.	8741
7590	05/11/2004		EXAMINER	
HUNTON & WILLIAMS LLP TREVOR CODDINGTON 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			CINTINS, IVARS C	
			ART UNIT	PAPER NUMBER
			1724	
			DATE MAILED: 05/11/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. .	Applicant(s)
	09/646,347	KARAMAN ET AL.
	Examiner Ivars C. Cintins	Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 January 2004.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-10 and 27 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-10 and 27 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Mehkeri et al. (U.S. Patent No. 5,512,491). The reference discloses removing microbiological contaminants, such as Cryptosporidium (col. 11, line 11), from water with a particulate medium having both surface hydrated active hydroxyl groups (see col. 3, lines 14-15), which in the case of alumina (col. 3, line 11) would be surface Al-OH groups, and a coating of freshly prepared aluminum hydroxide; and this is all that is required by claims 1, 2 and 6-8. Applicant should note that the claims merely require the use of a medium which “contains” surface Al-OH groups, and do not preclude the presence additional materials (i.e. the aluminum hydroxide coating) in this medium.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 9, 10 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehkeri et al. The reference discloses the claimed invention with the exception of the surface density of Al-OH groups on the alumina (claims 3-5 and 27) and the particle size of this alumina (claims 9, 10 and 27). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ alumina having the recited surface density of Al-OH

groups, in order to ensure that a sufficient amount of active hydroxyl groups are present to adequately purify the water (see col. 3, lines 2-5). Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ alumina having the recited particle size, in order to facilitate handling of this material.

Applicant's arguments filed Applicant's arguments filed January 20, 2004 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that Mehkeri et al. fails to teach a surface hydrated aluminum based medium. It is pointed out, however, that this reference clearly teaches that the base material will have some active hydroxyl groups in its natural form when hydrated (see col. 3, lines 14-15), which in the case of alumina (col. 3, line 11) will be Al-OH groups, but that this base material "will perform in a superior manner if treated to add hydroxyl groups" in the disclosed manner (see col. 3, lines 19-20). Accordingly, since the alumina of the reference medium will inherently have some surface hydrated Al-OH groups, and since the claims in this application do not preclude the presence of the added hydroxyl groups (i.e. the coating of aluminum hydroxide), this claimed medium does not distinguish over that of the reference.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

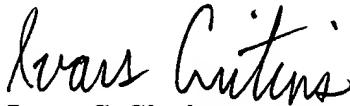
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Blaine Copenheaver, can be reached at (571) 272-1156.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ivars C. Cintins  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
April 4, 2004